

Applicant: John E. Sherry
Application No.: 09/978,383
Filing Date: October 16, 2001
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REMARKS

Reconsideration of the application as amended is respectfully requested.

Claims 1-16, 18-25, 28-30 and 32-39 are in the application. Through this amendment, claims 1, 19 and 29 have been amended, while claims 17, 26, 27, and 31 have been cancelled. New claims 36-39 have also been added. Although the total number of claims in the application remains the same (35 total claims), two of the new claims are independent claims and additional claims fees therefor are included herewith. If additional fees are deemed necessary, please charge Deposit Account No. 08-2461 for such additional charges.

In the Official Action, the Examiner rejected claims 1-2, 7-12, 14-17 and 29-34 under 35 U.S.C. §102(e) as being anticipated by Holman et al. (U.S. Patent No. 6,319,276).

Holman et al. is directed to an endovascular apparatus which includes a flexible linear or bifurcated tubular sleeve that is introduced to a desired implantation location in a collapsed state. Either mechanical or chemical hardening means may be introduced to expand the sleeve and make it rigid and circular at its desired repair site. (Column 1, lines 50-54). Where a chemical hardening means is utilized, a series of interconnected cylindrical tubules (such as tubules 40

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shown in Figure 4) are provided to expand and rigify the sleeve. (Column 3, lines 38-50).

Various tubule configurations are disclosed in Holman et al. (See, Figures 2-6 and 9).

Claim 1, as amended, is directed to a tubular prosthesis which includes "a tubular member" and "an outer covering". A pocket is defined between the tubular member and the outer covering where "said pocket singularly circumscribes said tubular member in an annular shape". None of the various tubule configurations shown in Holman et al. singularly circumscribe the respective tubular member in an annular shape. As such, amended claim 1, along with dependent claims 2-16, 18 and 36 are novel in view of Holman et al.

✓ Moreover, the claimed configuration of the pocket in claim 1 allows for a prosthesis to be formed which has a compliant seal ring that is not constrained by remaining portions of the prosthesis. With the configurations of Holman et al., the tubules are hardened so that a right cylindrical configuration of the sleeve is achieved. The invention of claim 1 allows for blood vessel compliance as pointed out in Applicant's specification at page 4, lines 3-5 where it states that the "invention is particularly beneficial in sealing a blood vessel having partial blockage (e.g., aortic calcification) and/or irregular vessel cross-sectional shape (e.g., neck angulation)." Accordingly, with the subject invention having a pocket that singularly circumscribes the tubular member in an annular shape, a seal ring can be formed that complies with irregular vessel

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configuration and is not constrained by other portions of the prosthesis. Holman et al. is concerned with obtaining right-cylindrical configurations and there is no suggestion in Holman et al. to allow for a seal ring to be formed as in claim 1. It is respectfully submitted that claim 1, along with dependent claims 2-16, 18 and 36 are non-obvious over Holman et al.

Claim 19 is directed to a tubular prosthesis which includes a tubular member, an outer covering, with a pocket being defined between the tubular member and the outer covering, and a filling agent disposed in the pocket. Claim 19 states "said pocket singularly circumscribing said tubular member in an annular shape". For the reasons set forth above with respect to amended claim 1, claim 19, along with dependent claims 20-25, 28 and 37, are also patentable over Holman et al.

Claim 29 is directed to a method of treating an aneurysm which includes the steps of "implanting endovascularly an endovascular prosthesis" in which a pocket is formed and "conveying an amount of filling agent into said pocket of said implanted endovascular prosthesis". In contrast to the endovascular apparatuses of Holman et al., claim 29 calls for conveying a filling agent into the pocket of the endovascular prosthesis once the prosthesis is implanted. Holman et al. relies on the conveyance of the fluid to implant the prosthesis. It is

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respectfully submitted that claim 29, along with dependent claims 30 and 32-35, are novel and non-obvious over Holman et al.

Claims 3-5 were rejected under 35 U.S.C. §103(a) as being unpatentable over Holman et al. in view of Kwan-Gett (U.S. Patent No. 5,151,105). The Examiner admitted that Holman et al. does not specify the use of an expandable stent and relied on Kwan-Gett to overcome this deficiency. The Examiner asserted that it would have been obvious to one having ordinary skill in the art to "utilize the stent with graft as in the Kwan-Gett Patent with the graft of the Holman et al. Patent because it is well known in the art that expandable stents have been utilized for supports [for] graft structures."

Kwan-Gett is directed to a collapsible vessel sleeve implant which utilizes various stent configurations or a balloon for expansion. No pocket for accepting an agent is disclosed in Kwan-Gett and, thus, this reference does not overcome the deficiencies noted above with respect to Holman et al. As such, it is respectfully submitted that claims 3-5, as depending from allowable claim 1, are also patentable for reasons indicated above.

Claims 28 and 35 were rejected under 35 U.S.C. §103(a) as being unpatentable over Holman et al. in view of McDermott et al. (U.S. Patent No. 6,312,462). The Examiner admitted

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that Holman et al. does not specify the use of a urethane as a curing agent. The Examiner relied on McDermott et al. for disclosing urethanes and concluded that it would have been obvious to use such with the Holman et al. devices.

McDermott et al. is directed to a bifurcated prosthesis for abdominal aortic aneurysm (AAA) repair. The prosthesis is double walled to form a plurality of pockets (See, e.g., Figures 3 and 4). McDermott et al., however, fails to disclose a pocket which singularly circumscribes a tubular member in an annular shape. In addition, McDermott et al. discloses the use of an inflation fluid to be pumped into the double-wall construction to provide rigidity. The fluid, however is pumped to expand the prosthesis in implanting it, similar to the technique in Holman et al. (See, e.g., column 6, lines 24-27). Accordingly, McDermott et al. does not overcome the deficiencies noted above with respect to Holman et al., and claims 28 and 35, as depending from claims 19 and 29, respectively, are patentable over Holman et al. and McDermott et al., each taken alone or in combination.

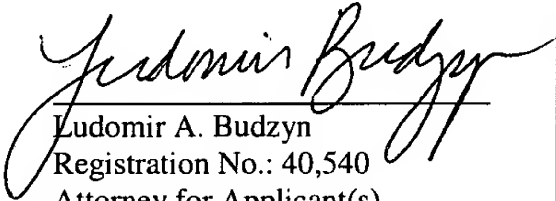
Applicant is pleased to note that the Examiner has indicated that claims 6 and 13 include allowable subject matter. Claims 6 and 13 have been rewritten into independent form as claims 38 and 39 respectively. It is respectfully submitted that these claims are patentable. Dependent claims 36 and 37 have been also added to provide additional protection for the Applicant. As

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depending from allowable claims 1 and 19, it is respectfully submitted that these claims are also allowable.

Favorable action is earnestly solicited. If there are any questions or if additional information is required, the Examiner is respectfully requested to contact Applicant's attorney at the number listed below.

Respectfully submitted,


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VERSION OF AMENDMENT WITH MARKINGS
SHOWING CHANGES MADE

1. (Amended) A tubular prosthesis comprising:

a tubular member, and

an outer covering sealed to portions of said tubular member, a pocket being defined between said tubular member and said outer covering to accommodate a pre-determined agent in forming a seal ring, said outer covering being impervious to said pre-determined agent, wherein said pocket singularly circumscribes said tubular member in an annular shape.

19. (Amended) A tubular prosthesis comprising:

a tubular member;

an outer covering sealed to portions of said tubular member, a pocket being defined between said tubular member and said outer covering so as to form a seal ring, said pocket singularly circumscribing said tubular member in an annular shape; and

a filling agent disposed in said pocket.

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29. (Amended) A method of treating an aneurysm, the method comprising the steps of:

implanting endovascularly an endovascular prosthesis including a tubular member, and an outer covering sealed to portions of said tubular member, a pocket being defined between said tubular member and said outer covering; and

conveying an amount of filling agent into said pocket of said implanted endovascular prosthesis, said amount being sufficient to at least partially fill said pocket to form a seal ring such that said pocket is in at least partial contiguous contact with a wall of blood vessel in proximity to the aneurysm.

36. (New) A prosthesis as in claim 1 further comprising at least one channel in fluid communication with said pocket.

37. (New) A prosthesis as in claim 19 further comprising at least one channel in fluid communication with said pocket.

38. (New) A tubular prosthesis comprising:

a tubular member, and

an outer covering sealed to portions of said tubular member, a pocket being defined between said tubular member and said outer covering to accommodate a pre-determined agent,

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said outer covering being impervious to said pre-determined agent, wherein said outer covering is pervious to a therapeutic agent disposed in said pocket.

39. (New) A tubular prosthesis comprising:

a tubular member, and

an outer covering sealed to portions of said tubular member, a pocket being defined between said tubular member and said outer covering to accommodate a pre-determined agent, said outer covering being impervious to said pre-determined agent, wherein said pocket is formed to be expandable with said outer covering being pleated about said pocket.